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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Application Number: 09/657,368
Filing Date: September 07, 2000
Appellant(s): NAKAJIMA ET AL.

William M. Schertler
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 10/28/05 appealing from the Office action mailed 03/01/05**(2)**.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

| | | |
|---|---|---|
| 6,701,732 | Yano et al. | 3-2004 |
| 6,490,705 | Boyce et al. | 12-2002 |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an

> application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Yano et al. (6,701,372).

Yano et al. taught the invention as claimed including input means for receiving said picture information (101); an encoder encoding said picture information from the input means on a preset cycle in a real time manner; storage means for writing and storing real-time-encoded frame data on said picture information from the encoder for each frame (col. 3, line 57 – col. 4, line 3 and col. 13, lines 38-48),; division means for sequentially dividing said real-time-encoded frame data stored in the storage means into packets for each frame (col. 3, line 57 – col. 4, line 3 and col. 13, lines 38-48),; and transmission timing control and transmission means for controlling transmission timing to sequentially transmit the divided packets to a network after a write time for storing said frame data for the packets and before a time for storing next frame data (col. 3, line 57 – col. 4, line 3 and col. 13, lines 38-48), and for transmitting the packets to the network according to a connection-less type protocol (col. 2, line 66 – col. 2, line 7).

Claim 14 is rejected as the analogues method.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yano et al. (6,701,372) as applied to claims 1 and 14 above, and further in view of Boyce (6,490,705).

5. As to claim 2 , Yano et al. taught the transmission timing for transmitting the divided packets to the network is determined from an encoded frame interval and a frame data storage time (Yano et al. col. 13, line lines 38-45).

Yano et al. did not expressly suggest using the division means for dividing each frame data into the packets, divides each of said encoded frame data into the packets in size suited for an Ethernet maximum transfer unit.

Boyce expressly suggested for IP transmission using Ethernet MTU as size of the packet (col. 8, lines 65-66). ). It would have been obvious to modify the teaching of Yano et al. with that of Boyce to gain maximum through put.

6. As to claim 3, , Yano et al. taught for transmitting the packets to the network is set so that a transmission time, in seconds, for transmitting the K-th frame data to the network corresponds to a value obtained by subtracting a write time, in seconds, for which said encoder writes the K-th frame data into said storage means, from a frame interval, in seconds, between the K-th frame data and a (K + 1)th frame data (Yano et al. col. 13, line lines 38-45).

Boyce expressly suggested for IP transmission using Ethernet MTU as size of the packet (col. 8, lines 65-66) and division means for dividing each frame data into the packets is constituted so that: a payload size of a transmitted UDP packet corresponds to a value obtained by subtracting an IP header size and a UDP header size from an Ethernet maximum transfer unit; and the number of UDP packets divided from a K-th frame corresponds to a value obtained by dividing a data size in bytes, of the K-th frame by the payload size, in bytes (col. 8, lines 65-66 and col. 9, line 35-39). It would have been obvious to modify the teaching of Yano et al. with that of Boyce to gain maximum through put.

7. Applicant's arguments filed 10/19/2004 have been fully considered but they are not persuasive.

8. Applicant argued in substance Yano et al. is completely silent with respect to the relationship between an encoder writing to storage and network transmission timing to a network.

This is expressly taught in the cited passage and for further evidence see col. 13, lines 38-67,and col. 12, lines 26-44.

9. Yano et al. does not disclose or suggest controlling transmission timing of packets to a network based on the write timing of a encoder.

This is expressly taught in the cited passage and for further evidence see col. 13, lines 38-67,and col. 12, lines 26-44.

**(10) Response to Argument**

Claim 1

Applicant argues that Yano et at. does not disclose or suggest that packets are transmitted to the network according to a connection-less type protocol. As described in col. 4, lines 57-63 of Yano et at., the data transfer rate in the data transmitter 1-12 is determined by the receiver report from the receiving terminal 1-2. This corresponds to a connection-oriented protocol. In contrast, the claimed transmission timing control and transmission means transmits packets to the network using a connection-less type protocol. According to a connection-less type protocol, transmission timing is determined without using a receiver report from a receiving terminal.

**In response**

**Yano et al. taught the use of the internet, the internet operated according to the Internet Protocol, which is connection-less. Further note if the system as disclosed by Yano et al. , operated according to a connection oriented protocol, (e.g. PSTN) the connection status does not change, therefore the need for monitoring would not exist, as all the buffering would have been reserved, before the connection was put through.**

Appellant rgues that Yano et al. do not disclose or suggest "transmission timing control and transmission means ...wherein packets corresponding to respective frames are transmitted to the network during a period after said encoder writes real-time encoded data corresponding to a frame to the storage means and before said encoder writes data corresponding to a next frame to the storage means, ..." as recited in claim 1.

**In response**

**Note the sections, cited by appellant in summary of the invention, "As described above, according to the first embodiment, the transmission control section 15 does not transmit data to the network for a time for which the real time encoder 11 writes the data into the frame buffer 12".**

**This means that the data written to the frame buffer is not transmitted until after the writing of that frame is completed, there is no mention of a next frame.**

**"Furthermore, by extending the transmission time for transmitting frame data to the network to a time at which the next frame is written into the buffer, it is possible to avoid burst transmission of frame data packets to the network compared with the conventional direct transmission method and to thereby suppress the generation of packet loss and to improve transmission efficiency."**

**Clearly written is that the transmission time is extended to included the time when the immediately following frame is completed.**

**Further note claim 2, the transmission timing for transmitting the packets corresponding to respective frames to the network is determined from an encoded frame interval and a frame data storage time, therefore the it supports the examiner position that the transmission time for "controlling transmission timing to sequentially transmit the divided packets to a network after a write time for storing said frame data for the packets and before a time for storing next frame data," includes the completion of the next frame write not the start as argued by Appellant.**

**Therefore the cited passage reads on the claim limitation.**

Claim 14

Appellant argues Yano et al. does not disclose or suggest "transmitting the packets to the network according to a connection-less type protocol," as recited in claim 14, for the same reasons set forth above with respect to the corresponding portion of apparatus claim 1.

**In response**

**Yano et al. taught the use of the internet, the internet operated according to the Internet Protocol, which is connection-less. Further note if the system as disclosed by Yano et al. , operated according to a connection oriented protocol, (e.g. PSTN) the connection status does not change, therefore the need for monitoring would not exist, as all the buffering would have been reserved, before the connection was put through.**

Appellant argues Yano et al. do not disclose or suggest "controlling transmission timing to sequentially transmit the divided packets to a network after a write time for storing said frame data for the packets and before a time for storing next frame data," as recited in claim 14, for the same reasons set forth above with respect to the corresponding portion of apparatus claim 1.

**In response**

**Note the sections, cited by appellant in summary of the invention, "As described above, according to the first embodiment, the transmission control section 15 does not transmit data to the network for a time for which the real time encoder 11 writes the data into the frame buffer 12".**
**This means that the data written to the frame buffer is not transmitted until after the writing of that frame is completed, there is no mention of a next frame.**

**"Furthermore, by extending the transmission time for transmitting frame data to the network to a time at which the next frame is written into the buffer, it is possible to avoid burst transmission of frame data packets to the network compared with the conventional direct transmission method and to thereby suppress the generation of packet loss and to improve transmission efficiency."**

**Clearly written is that the transmission time is extended to included the time when the immediately following frame is completed.**

**Further note claim 2, the transmission timing for transmitting the packets corresponding to respective frames to the network is determined from an encoded frame interval and a frame data storage time, therefore the it supports the examiner position that the transmission time for "controlling transmission timing to sequentially transmit the divided packets to a network after a write time for storing said frame data for the packets and before a time for storing next frame data," includes the completion of the next frame write not the start as argued by Appellant.**

**Therefore the cited passages reads on the claim limitation.**

Claim 2

Appellant argues Yano et al. do not disclose or suggest that the transmission timing for transmitting the packets corresponding to respective frames to the network is determined from an encoded frame interval and a frame data storage time, as recited in claim 2. Further, Boyce et al. do not alleviate this deficiency of Yano et al.

**In response**

**Yano et al. set forth**

**"If the time set in the timer has been reached (step S1202), video data is captured (step S1203)".**

**If the data is captured it is inherent that it is stored.**

Claim 3

Appellant alleges column 13, lines 38-45 of Yano et al. is unrelated to transmission timing for transmitting packets to a network and does not disclose or suggest the specific manner for determining the transmission time.

**In response**

**Yano et al. set forth a relationship for transmitting packet and the video capture and the transmission time.**

**"The video data generator 1001-11 sets a given time in a timer for video capture (step S1201). This time is determined in correspondence with the video frame transmission interval calculated by the rate adjuster 1001-13. If the time set in the timer has been reached (step S1202), video data is captured (step S1203). The captured video data is compressed and packetized, and sequence numbers are given to the packets to obtain data that can be transmitted (step S1204). These data are passed to the data transmitter 1001-12 (step S1205). After that, the video data generator 1001-11 repeats the processing in steps S1201 to S1205. "**

Still further, Boyce does not disclose or suggest the division means, as recited in claim 3, for dividing each frame data into the packets such that a payload size of a transmitted UDP packet corresponds to a value obtained by subtracting an IP header size and a UDP header size from an Ethernet maximum transfer unit; and the number of UDP packets divided from a K-th frame corresponds to a value obtained by dividing a data size, in bytes, of the K-th frame by the payload size, in bytes, of the transmitted UDP packet. The Office Action cites column 8, lines 65-66 and column 9, lines 35-39 of Boyce for disclosure of these features.

Boyce discusses setting the maximum packet size for Internet Protocol (IP) transmission to the Ethernet Maximum Transport Unit (MTU) (see column 8, lines 65-67), and discusses that a maximum packet size is equal to the Ethernet MTU size minus the number of packet header bytes used (column 9, lines 38-39). However, Boyce does not specifically disclose subtracting an IP header size and a UDP header size from an Ethernet maximum transfer unit.

**In response**

**Boyce discusses setting the maximum packet size for Internet Protocol (IP) transmission to the Ethernet Maximum Transport Unit (MTU) (see column 8, lines 65-67), and discusses that a maximum packet size is equal to the Ethernet MTU size minus the number of packet header bytes used (column 9, lines 38-39).**

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Conferee

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